



State Commission of Ukraine
on Mineral Resources



Ukrainian
Geological
Survey

Implementation of the UNFC in Ukraine



SERGII PAIUK

Chairman of the State Commission of Ukraine on Mineral
Resources



RESOURCE MANAGEMENT WEEK 2023

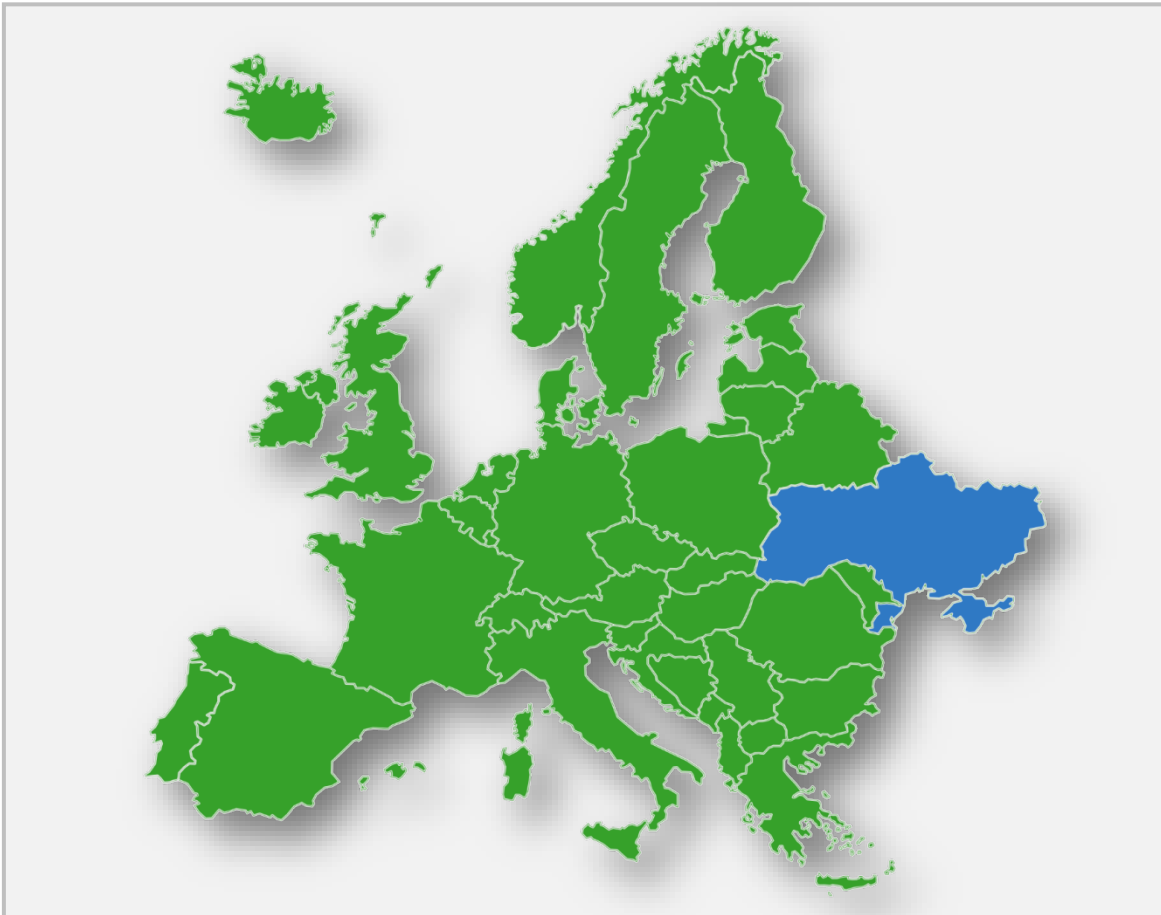
ASSURING SUSTAINABILITY IN RESOURCE

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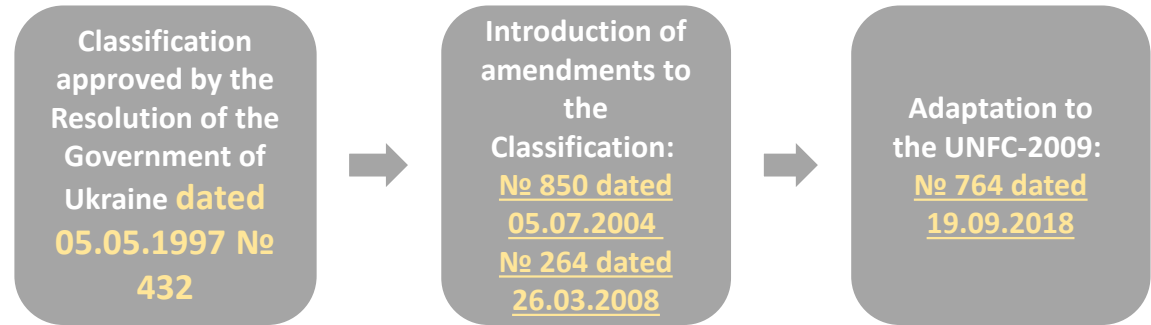


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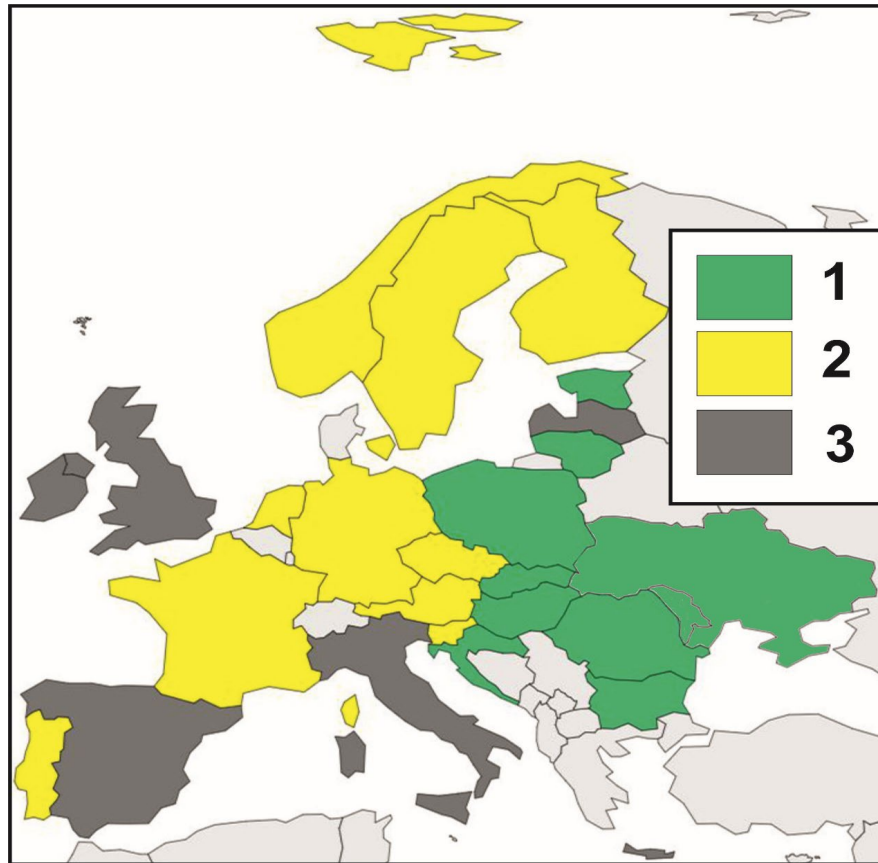
Classification of Ukraine's Mineral Reserves and Resources



- In 1997, Ukraine was the first country in Europe and worldwide to implement the UNFC standards at the state level.
- Classification of Mineral Reserves and Resources was developed following the UN ECOSOC decision No. 227/1997, which recommended it for practical use by the UN member states.



Systematic accounting of mineral raw materials



Source: ORAMA project (<https://orama-h2020.eu/>)

- 1. Countries where systematic accounting of mineral raw material resources is conducted at the state level (balance of mineral deposits, cadastre of mineral deposits and occurrences).
- 2. Countries where accounting of mineral raw material resources is conducted in the form of consolidated informational documents (statistics of ministries, mineral bulletins, annual reports).
- 3. Countries where accounting of mineral raw material resources is not conducted. Information is provided by various organizations in the form of company reports, scientific works, etc.

In European countries, primary state institutions responsible for such accounting are geological surveys (30%) and statistical agencies (45%).

STATE OF THE BALANCE OF MINERAL DEPOSITS IN 2022

State balance of Ukraine's minerals reserves



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Mineral	Total number of deposits (subsoil areas)	Number of deposits assessed based on the Classification of Mineral Reserves and Resources of the State Subsoil Fund (UNFC)	Number of deposits assessed based on the 1960 and 1981 Classifications of the former USSR
Natural gas	467	467	-
Oil	216	216	-
Metallic (ore)	157	64	93
Water (mineral, drinking, technical)	1873	717	1156
Coal	1039	512	527
Peat	682	55	627
Non-Metallic (construction, mining chemical, mining technical)	4738	1940	2798
Precious and collectible stones	19	19	-
Total	9191	3971	5201

Source: State Balance of Mineral Reserves of Ukraine (2022), SSPE "State Geological Information Fund of Ukraine"

General comparison scheme for classification systems



Level of confidence	UNFC					Classification of the former USSR		
	Class	Subclass	Categories			Balance reserves	Off-balance reserves	Resources
			E	F	G			
<div style="text-align: center;"> <p>highest</p> <p>lowest</p> </div>	Viable projects	Active	1	1	1	A, B, C ₁		
		Approved for development	1	1	2	A, B, C ₁ (sometimes C ₂)		
	Potentially viable projects	Development is pending	2 (3)	2 (3)	1		A, B, C ₁	
			2 (3)	2 (3)	2		C ₂ (sometimes C ₁)	
			2 (3)	2 (3)	3			P ₁
	Non-viable projects	Development is unclarified	3	3	3, 4			P ₂ (P ₃)

Harmonization with the UNFC categories



E

Primary conditions	UNFC
Balance reserves of deposits and sites approved by the SCMR of the USSR, TCMR, or SCMR of Ukraine based on the 1960 and 1981 Classifications of the former USSR	2xx Conditionally balance and off-balance reserves, the production and use efficiency of which cannot be unambiguously determined at the time of assessment
Off-balance reserves of deposits and sites approved by the SCMR of the USSR, TCMR, or SCMR based on the 1960 and 1981 Classifications of the former USSR.	3xx Reserves, the assessment of which has not been conducted, or it does not allow determining their commercial significance

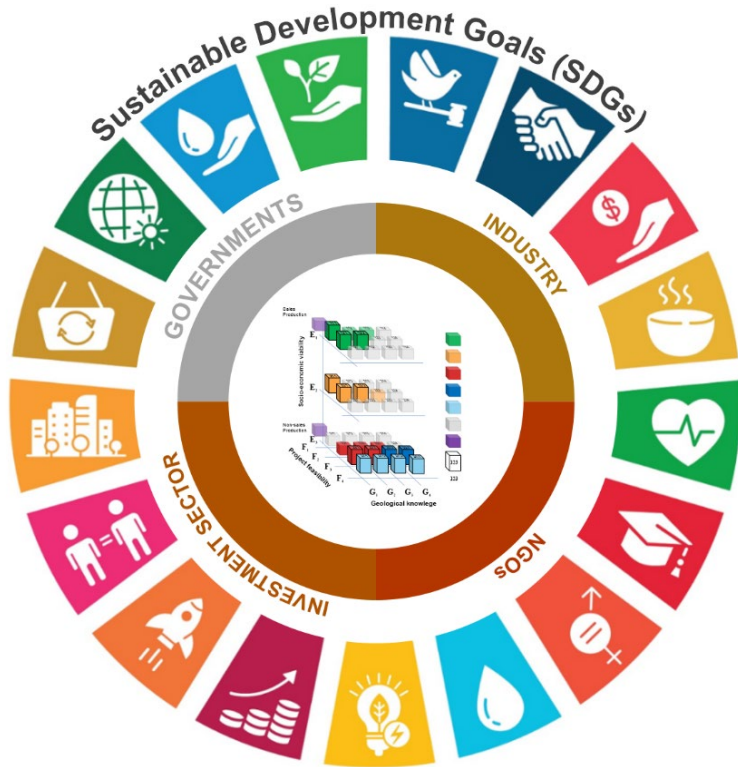
F

Primary conditions	UNFC
Reserves of deposits and sites approved by the SCMR of the USSR, TCMR, or SCMR of Ukraine based on the 1981 and 1960 Classifications of the former USSR and recognized as such that are prepared for commercial development.	x2x The degree of justification of reserves extraction based on the determined optimal development project requires further detailed assessment
Reserves of deposits and sites approved by the ACMR, SCMR of the USSR, TCMR, or SCMR of Ukraine based on older Classifications of the former USSR.	x3x Possible commercial significance and profitability of the development cannot be reliably determined due to the lack of information, but existing positive results of geological exploration justify further geological exploration works to obtain additional data to assess the feasibility of development
Mineral reserves recorded in the Balance or Cadastre that have been approved by the ACMR, SCMR of the USSR, TCMR, or SCMR of Ukraine and recognized as explored or prospective for exploration.	x4x Mineral reserves and resources that cannot be extracted
Mineral reserves and resources, including residual reserves of previously operated deposits and sites that are reasonably classified as those that cannot be extracted using modern methods of development	

G

Classification of the former USSR	Primary conditions	UNFC
A	Reserves of deposits and sites approved by the SCMR of the USSR, TCMR, or SCMR for which the ratio of different categories of reserves corresponds to the SCMR guidelines	xx1
B		
C ₁		
C ₂	Reserves of deposits and sites approved by the SCMR of the USSR, TCMR, or SCMR for which the ratio of different categories of reserves does not correspond to the SCMR guidelines	xx2
A		
B		
C ₁	Mineral reserves that are recorded in the Balance or Cadastre but they have not been approved by the SCMR of the USSR, TCMR, SCMR	xx2
C ₂		
A		
B	Mineral reserves that are recorded in the Balance as previously explored and non-operated deposits with incomplete exploration	xx3
C ₁		
C ₂		

Conclusions



E
 Consideration of social and environmental factors of project viability

F
 Technological feasibility of the project

G
 Determination of the level of confidence

- ✓ Integration into standards of residual mineral resource accounting, their classification and management within the UNFC framework opens up economic and social benefits for Ukraine. In Ukraine, more than 43% of deposits are reassessed following the UNFC. More than 5,200 deposits remain in the undistributed subsoil fund and require reassessment
- ✓ State Accounting of Mineral Deposits and Occurrences using the UNFC comprehensively reflects the current state of Ukraine’s mineral and raw material base. Application of other classification systems during accounting does not cover all types of minerals based on their commercial significance

Thank you!

SERGII PAIUK

Chairman of the State Commission of Ukraine on Mineral Resources

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